

1340-1-017

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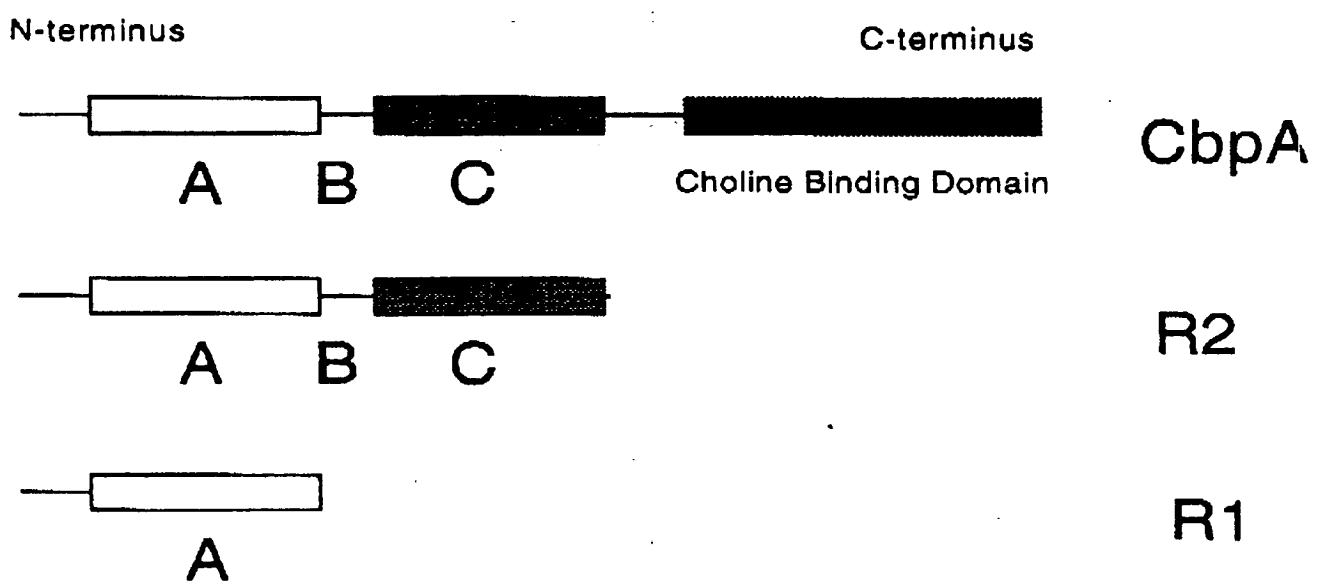


Figure 1

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	AVASLVMGSV р HATENEVTTQVATSSNRANESOTEHKAAKQ							VDEYIKKML	Q-L
	10	20	30	40	50	60	70		
SPB328 (23F)	Cbp -	AVASLVMGSV р HATEKEVTTQVATSSNKANKSOTEHMKAAKQ-	-	-	-	-	-	VDEYIKKKL	Q-L 53
SPB365 (23F)	Cbp -	AVASLVMGSV р HATEKEVTTQVATSSNRANKSOTEHMKAAKQ-	-	-	-	-	-	VDEYIKKKL	Q-L 53
SPB105 (6B)	CbpA	AVASLVMGSV р HATEKEVTTQVATSSNRANESQAHRKAAEQF-	-	-	-	-	-	DEYIKTM	Q-L 54
SPSJ12 (19A)	Cbp -	AVASLVMGSV р HATENEGTTQVATSSNKANKSOTEHMKAAKQ-	-	-	-	-	-	VDEYIEKML	Q-L 53
SPB331 (14)	CbpA	--VASLVMGSV р HATEKEVTTQVATSSNRNGESQAEMKAAKQ-	-	-	-	-	-	VDEYIKKKL	Q-L 52
SPR332 (9V)	CbpA	CTVASLVMGSV р HATENERTTQVPTSSNRGK--PERRKAAEQF-	-	-	-	-	-	DEYINKMI	Q-L 51
ATCC2	CbpA trun	VAVASLVMGSV р HATEKEVTTQVPTYSNMAK--TEHKAAKQV-	-	-	-	-	-	VDEYIEKMLREIQ	Q-L 55
R6X(2)	CbpA tru	--ENEGSTQAA TSSNMAK--TEHKAAKQV-	-	-	-	-	-	VDEYIEKMLREIQ	Q-L 40
SPSJ9 (14)	CbpA	Y-IASLFLGGVVHAE--GVRSENNPTVTSQQDISKKYADE--	-	-	-	-	-	VKSHLEKILSEIQTNL	54
ATCC6B	CbpA tru	--ASLFLGGVVHAE--GVRSGNNSTVTSSQQDISKKYADE--	-	-	-	-	-	VEHLQSIILKDVNKNL	52
Ntpe4	CbpA tru	CTVASLVMGSV р HATENEGATQVPTSSNRANESQAECGEQPKKLDERDKARKEVEYVKITVGESYAKS	-	-	-	-	-		70
ATCC4	CbpA trun	-IVASLVMGSV р HATENEGATQVPTSSNRANESQAECGEQPKKLDERDKARKEVEYVKITVGESYAKS	-	-	-	-	-		69
	DRRKHTQNVALNTKLSAIKTEYLNGLSVLEEKSEAE LPSEIKA							KLDAAFQE QFKKD TL	
	80	90	100	110	120	130	140		
SPB328 (23F)	Cbp	DRRKHTQNVLGLT KLGVIKTEYLHGLSVSKKKSEAE LPSEIKA	-	-	-	-	-	KLDAAFQE QFKKD TL	
SPB365 (23F)	Cbp	DRRKHTQNVLGLT KLGVIKTEYLHGLSVSKKKSEAE LPSEIKA	-	-	-	-	-	KLDAAFQE QFKKD TL	111
SPB105 (6B)	CbpA	DRRKHTQNVALNIKLSRIKTEYLRLKLNVLEEKSKAEL PSETKK	-	-	-	-	-	EIDA AFQE QFKKD TL	113
SPSJ12 (19A)	Cbp	DRRKHTQNVLGLT KLGAIKTEYLRLGLSVSKKESTAEL PSEIKA	-	-	-	-	-	KLTAAFKQF QFKKD TL	111
SPB331 (14)	CbpA	DRRKHTQNVLGLT KLGVIKTEYLHGLSVSKKKSEAE LPSEIKA	-	-	-	-	-	KLDAAFQE QFKKD TL	110
SPR332 (9V)	CbpA	DRRKHTQNLAFTNQLSRIKTEYLNLG--KEKSEAE LPSEIKA	-	-	-	-	-	ELDAAFKQF QFKKD TL	106
ATCC2	CbpA trun	DRRKHTQNVALNIKLSAIKTKYLRELVLEEKSKAEL PSEIKA	-	-	-	-	-	EKSEAELPSEIKA	
R6X(2)	CbpA tru	DRRKHTQNVALNIKLSAIKTKYLRELVLEEKSKAEL PSEIKA	-	-	-	-	-	KLDAAFQE QFKKD TL	110
SPSJ9 (14)	CbpA	DRSKHIKTVNLINKLQDIKRTYLYELNVLEDKSKAEL PSKIKA	-	-	-	-	-	ELDAAFQE QFKKD TL	98
ATCC6B	CbpA tru	KKVQHTQNA DFNKKL SKI KTKYLYELNVLEDKSKAEL PSKIKA	-	-	-	-	-	ELDAAFQE QFKKD TL	112
Ntpe4	CbpA tru	TKKRHTITVALVNE LNNNIKNEYLN--KIVESTSESQQLIMMESRSKVDEAVSKFEKDSSSSSDSSTK	-	-	-	-	-		138
ATCC4	CbpA trun	TKKRHTITVALVNE LNNNIKNEYLN--KIVESTSESQQLIMMESRSKVDEAVSKFEKDSSSSSDSSTK	-	-	-	-	-		137
	-PTEPGKKVAEA EKKVEEAKK-							AEDQKEEDRRNYPTITYKTLELEIAESDVEV	
	150	160	170	180	190	200	210		
SPB328 (23F)	Cbp	-PTEPGKKVAEA EKKVEEAKK-	-	-	-	-	-	AEDQKEEDRRNYPTNTYKTLELEIAESDVEV	162
SPB365 (23F)	Cbp	-PTEPGKKVAEA EKKVEEAKK-	-	-	-	-	-	AEDQKEEDRRNYPTNTYKTLELEIAESDVEV	162
SPB105 (6B)	CbpA	--TK--KTVAAEAEKKVEEAKK-	-	-	-	-	-	AKAQKEEDRRNYPTNTYKTLELEIAESDVEV	161
SPSJ12 (19A)	Cbp	-KPEKKVAEA EKKVEEAKK-	-	-	-	-	-	AEDQKEEDRRNYPTNTYKTLELEIAESDVEV	160
SPB331 (14)	CbpA	-PTEPGKKVAEA EKKVEEAKK-	-	-	-	-	-	AEDQKEEDRRNYPTNTYKTLELEIAESDVEV	161
SPR332 (9V)	CbpA	-PTEPEKKVAEA EKKVEEAKKVAEAKKAKAQKEEDRRNYPTNTYKTLELEIAESDVEV	-	-	-	-	-	AKAQKEEDRRNYPTNTYKTLELEIAESDVEV	164
ATCC2	CbpA trun	--KLGEKVAEA EKKVAAEAKK-	-	-	-	-	-	AKAQKEEDRRNYPTNTYKTLELEIAESDVEV	159
R6X(2)	CbpA tru	--KPGEKVAEA EKKVEEAKK-	-	-	-	-	-	AEDQKEEDRRNYPTNTYKTLELEIAESDVEV	147
SPSJ9 (14)	CbpA	-PTEPGKKVAEA EKKVEEAKK-	-	-	-	-	-	AKAQKEEDRRNYPTNTYKTLELEIAESDVEV	163
ATCC6B	CbpA tru	--STEPEKKVAEA EKKVEEAKK-	-	-	-	-	-	AEDQKEEDRRNYPTNTYKTLELEIAESDVEV	164
Ntpe4	CbpA tru	PEASDTAKPNKPTEPGEKVAEA EKKVEEAKK-	-	-	-	-	-	AKDQKEEDRRNYPTNTYKTLELEIAESDVEV	201
ATCC4	CbpA trun	PEASDTAKPNKPTEPGEKVAEA EKKVEEAKK-	-	-	-	-	-	AKDQKEEDRRNYPTNTYKTLELEIAESDVEV	200

Figure 2A

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	<u>KKAEELVLKEEAKESRDEGGKINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA</u>						
	220	230	240	250	260	270	280
SPB328 (23F)	Cbp	KKAEELVLKEEAKESRDEGGKINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA	227				
SPB365 (23F)	Cbp	KKAEELVLKEEAKESRDEGGKINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA	227				
SPB105 (6B)	Cbp	KKAEELVLKEEAKESRDEGGKINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA	230				
SPSJ12 (19A)	Cbp	KKAEELVLKVANEPRDEEKIKQAEAEVESKKAATRLKKIKTDTREKAEE-AKRRVDAKEODE	224				
SPB331 (14)	Cbp	KKAEELVLKVANEPRDEEKIKQAEAEVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA	226				
SPR332 (9V)	Cbp	KEAELVLVKEADESRENEGTINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA	229				
ATCC2	Cbp	trun KKAEELVLKEEAKESRDEGGKINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRAEAEEDQ	222				
R6X(2)	Cbp	tru KEAELVLVKEEAKESRDEGGKINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLKEA-NVA	213				
SPSJ9 (14)	Cbp	KEAELVLVKEADESRENEGTINQAKAKVESKKAATRLKKIKTDTREKAEE-AKRRADAKLQEAA-NVA	227				
ATCC6B	Cbp	tru KKAEELVLKVANEPRDEEKIKQAEAEVESKKAATRLKKIKTDTREQAEEEA-KV	234				
Ntype4	Cbp	tru KKAEELVLKVANEPRDEEKIKQAEAEVESKKAATRLKKIKTDTREQAEEEA-KV	261				
ATCC4	Cbp	trun KKAEELVLVKANEPRDKQKQAEAEVESKKAATRLKKIKTDTREAEAEE-AKRRADAK	260				

	<u>-SEQDKPKGRAKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK</u>						
	290	300	310	320	330	340	350
SPB328 (23F)	Cbp	TSEQDKSKRRAKREVXGELATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	297				
SPB365 (23F)	Cbp	TSEQDKSKRRAKREVXGELATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	297				
SPB105 (6B)	Cbp	TSEQDKPKGRKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	300				
SPSJ12 (19A)	Cbp	-S-SKRRKSRSRKXRGDVGEGATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	291				
SPB331 (14)	Cbp	TSEQDKPKGRKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	296				
SPR332 (9V)	Cbp	--S-SKRRKSRSRKXRGDVGEGATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	295				
ATCC2	Cbp	trun ---DILKRTKRAVFGEPATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	288				
R6X(2)	Cbp	tru TSDQGKPKGRKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	283				
SPSJ9 (14)	Cbp	-S-SKRRKSRSRKXRGDVGEGATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	293				
ATCC6B	Cbp	tru ---DEPKRTKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	300				
Ntype4	Cbp	tru --EQGPKPKGRKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	328				
ATCC4	Cbp	trun --EQGPKPKGRKRGVPGLATPDCKENDAKSSDSSVGEETLPLPSLKPKEKKVAAEAKVVEAKKKAAEDQK	327				

	<u>EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD</u>						
	350	370	380	390	400	410	420
SPB328 (23F)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	367				
SPB365 (23F)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	367				
SPB105 (6B)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	370				
SPSJ12 (19A)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	361				
SPB331 (14)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	366				
SPR332 (9V)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	365				
ATCC2	Cbp	trun EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	358				
R6X(2)	Cbp	tru EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	353				
SPSJ9 (14)	Cbp	EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	363				
ATCC6B	Cbp	tru EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	370				
Ntype4	Cbp	tru EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	398				
ATCC4	Cbp	trun EEDRRNYPINTYKITLELEIAESDVEVKAAEELVLKEEAKESRNEEKVKQAKAKVESKKAATRLEKIKTD	397				

	<u>RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA</u>						
	430	440	450	460	470	480	490
SPB328 (23F)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	437				
SPB365 (23F)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	437				
SPB105 (6B)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	437				
SPSJ12 (19A)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	419				
SPB331 (14)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	436				
SPR332 (9V)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	432				
ATCC2	Cbp	trun RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	425				
R6X(2)	Cbp	tru RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	411				
SPSJ9 (14)	Cbp	RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	423				
ATCC6B	Cbp	tru RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	437				
Ntype4	Cbp	tru RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	458				
ATCC4	Cbp	trun RKKAEE-ERKAAEEDVKVEKPAEQQPAPAPQPEKPAEERPAPAP--PKPENPAEOPKAEKPADQQA	457				

	<u>EE--</u>						
	439	437	439	419	437	433	427
SPB328 (23F)	Cbp	EE					
SPB365 (23F)	Cbp		EE				
SPB105 (6B)	Cbp	EE					
SPSJ12 (19A)	Cbp		EE				
SPB331 (14)	Cbp	EE					
SPR332 (9V)	Cbp	E					
ATCC2	Cbp	trun EE					
R6X(2)	Cbp	tru EE					
SPSJ9 (14)	Cbp	EE					
ATCC6B	Cbp	tru EE					
Ntype4	Cbp	tru EE					
ATCC4	Cbp	trun EE					

Figure 2B

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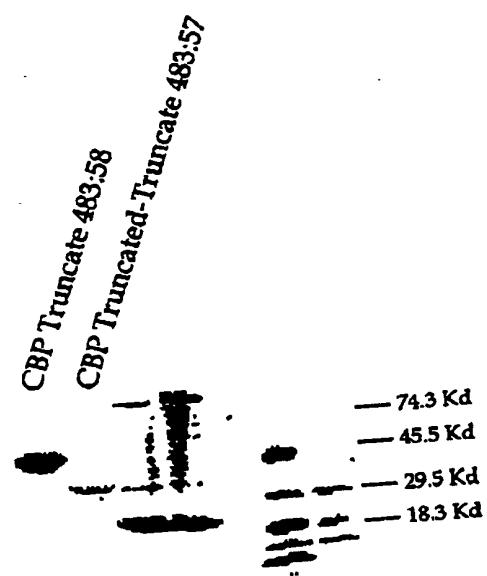


Figure 3

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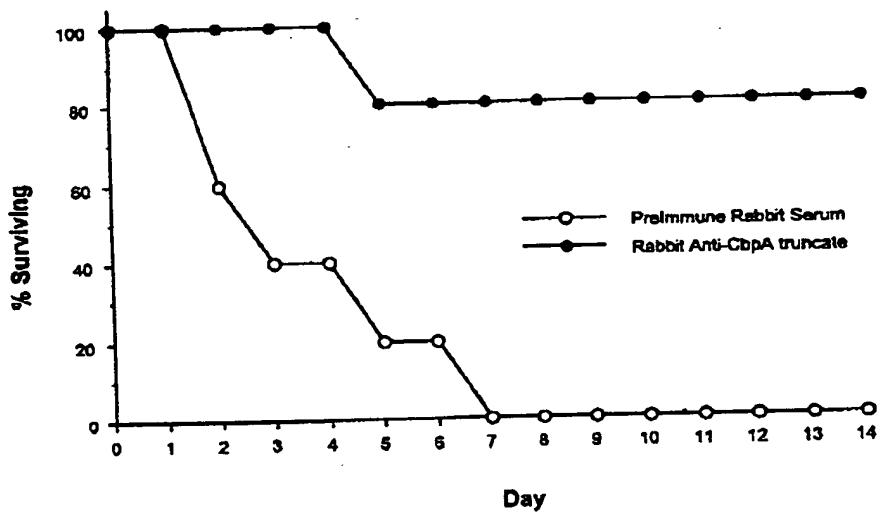


Figure 4

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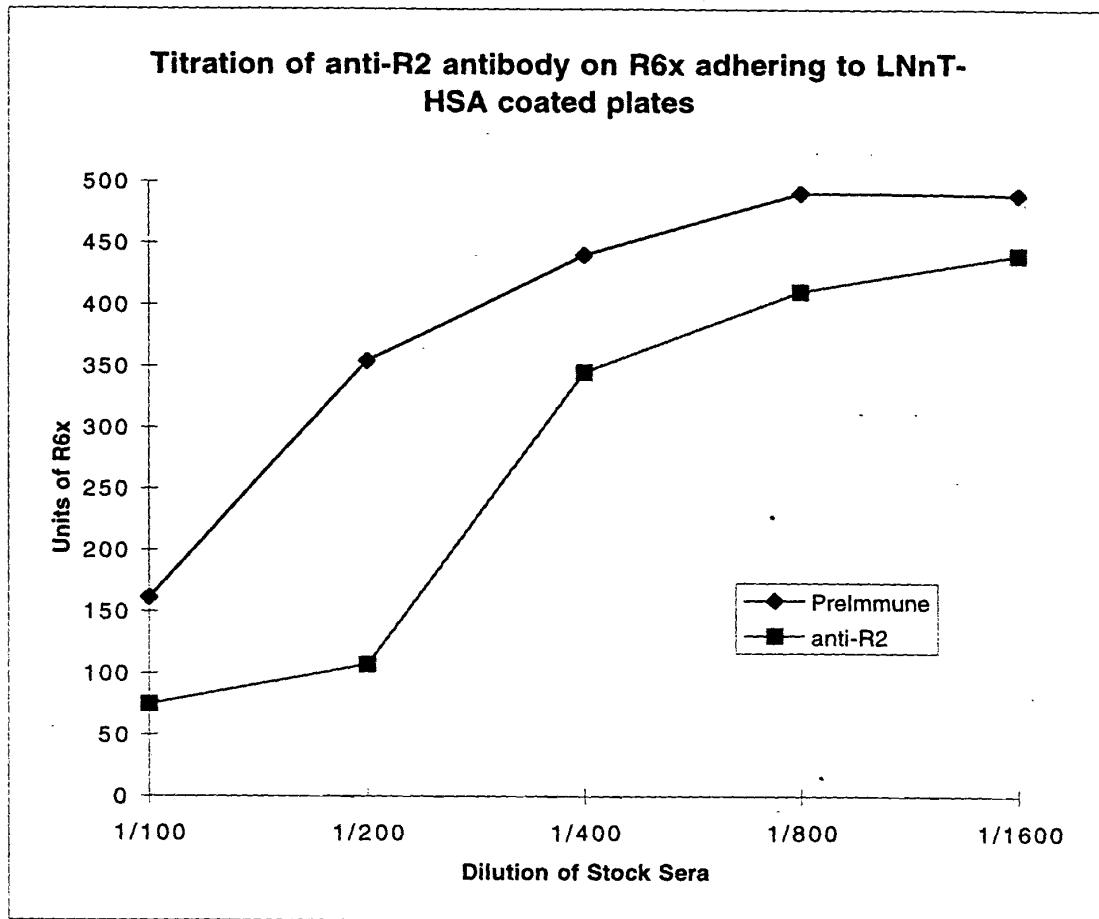


Figure 5

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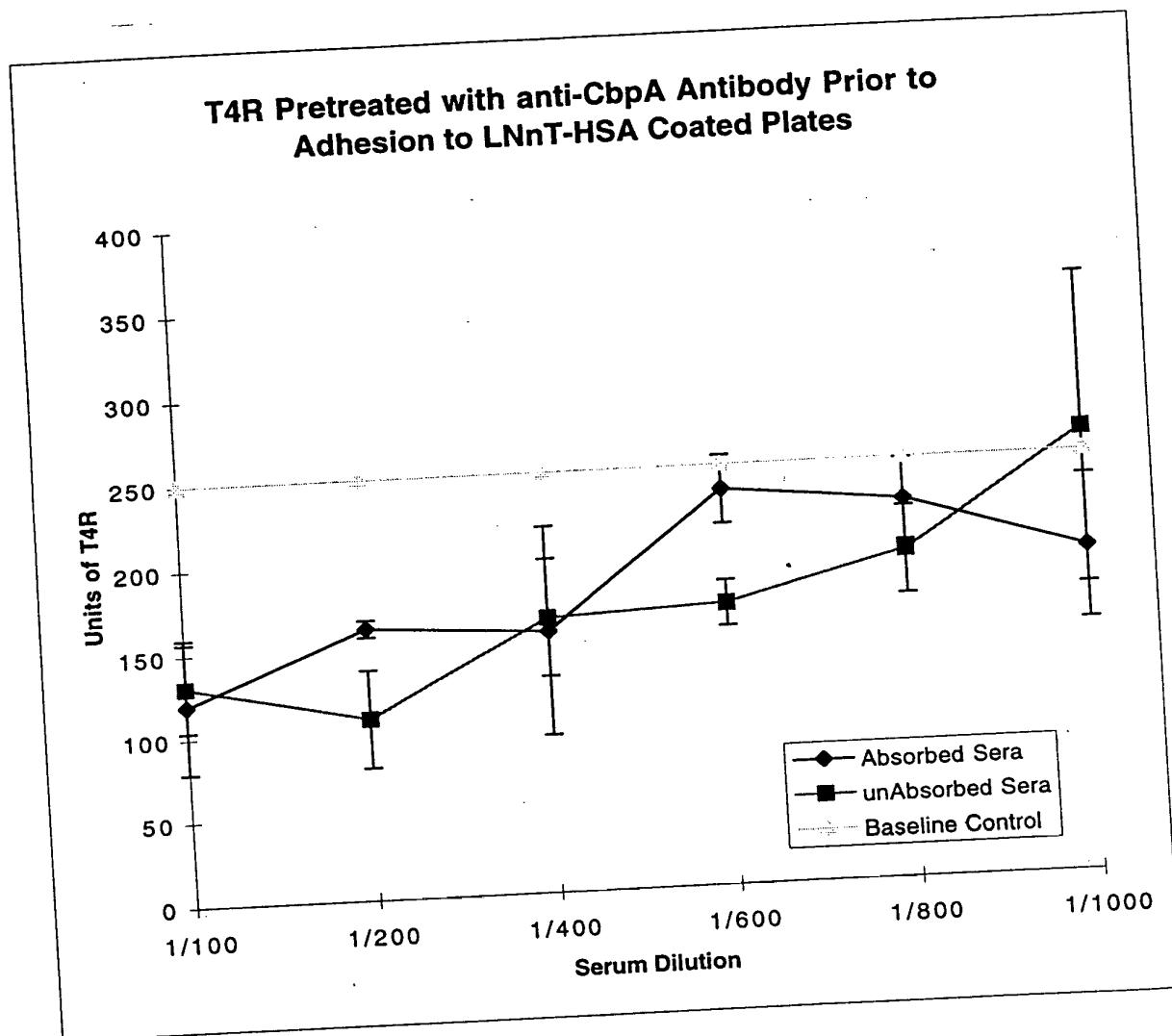


Figure 6

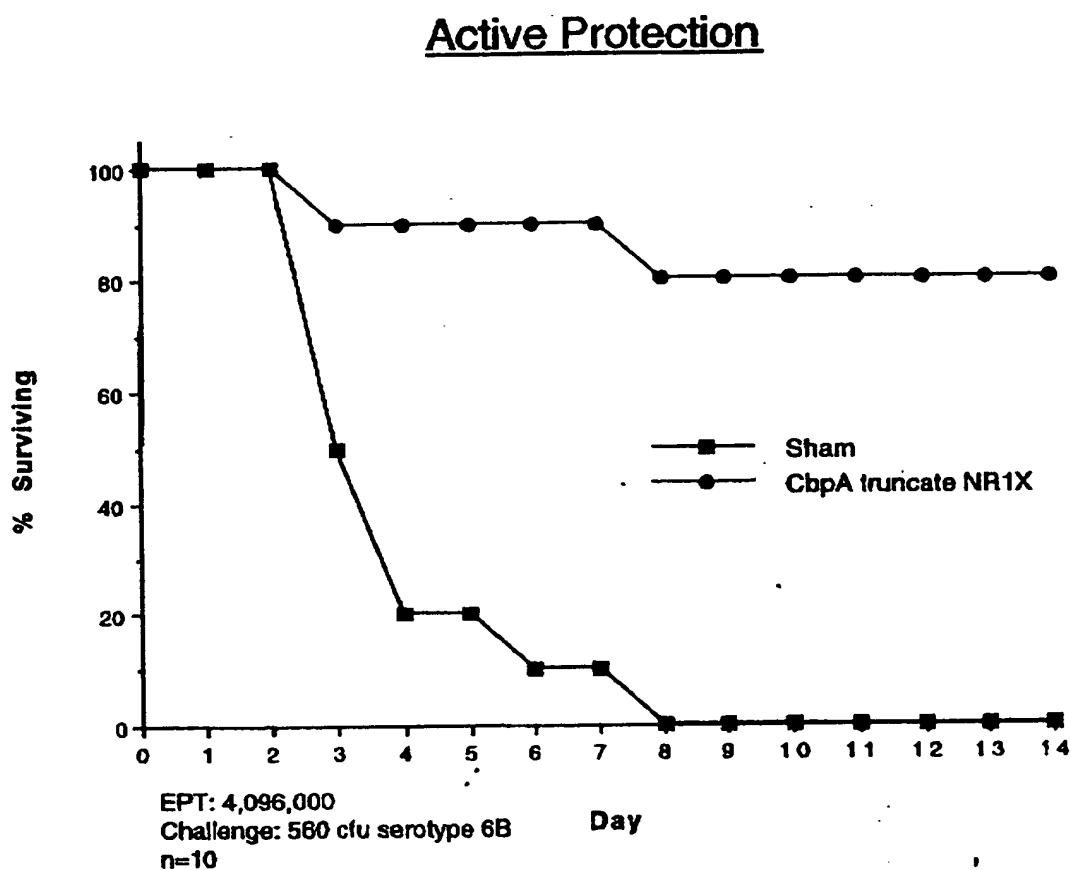


Figure 7